

**IMPROVED SYSTEM AND METHOD
FOR INTRALUMINAL IMAGING**

ABSTRACT OF THE DISCLOSURE

An improved catheter system having an ultrasonic imaging transducer coupled 5 to a drive cable disposed within a lumen of a flexible tubular catheter body. An improvement including a reconfiguration of the ferrites in the hub assembly, such that the need for the gap between the ferrites is removed. A strain relief member is provided to increase the strength of the electrical transmission lines to enable them to withstand the tensile forces caused by either flushing and/or pull-back operations. A device which allows the electrical 10 transmission lines to extend their length when placed in tension may also be employed to provide strain relief to the electrical transmission lines. Another improvement includes a counter-wound coil structure, which may either expand or contract as the drive cable is being rotated to strengthen the drive cable. The distal tip of the catheter body may be redesigned to provide a lumen which allows for the release of flushing fluids through a distal port in the 15 guidewire lumen.

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